

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) 14 DECEMBER 2005 (14.12.2005)

Applicant's or agent's file reference  
05FLWW100

## FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/KR2005/002989

International filing date (day/month/year)

09 SEPTEMBER 2005 (09.09.2005)

Priority date(day/month/year)

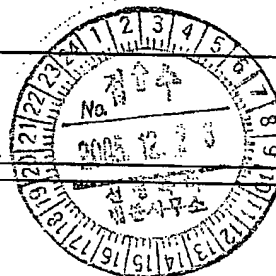
09 SEPTEMBER 2004 (09.09.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC7 A47L 15/46

Applicant

LG ELECTRONICS, INC. et al



## 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

## 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR



Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon  
302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Date of completion of this opinion

13 DECEMBER 2005 (13.12.2005)

Authorized officer

KIM, Sang Wook

Telephone No. 82-42-481-5476



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2005/002989

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 A47L 15/46**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A47L 15/00, A47L 15/46, B08B 3/02, D06F 33/02, G05D 23/19

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
KR, IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 1998-35119 A (TONGYANG MAGIC CO., LTD.) 5 August 1998 See the whole document	1-20
Y	KR 1995-9390 A (DAEWOO ELECTRONIC CO.) 21 April 1995 See the whole document	1-20
Y	KR 1996-16834 A (LG ELECTRONICS CO., LTD.) 17 June 1996 See the whole document	1-20
Y	US 6615850 A (RICHARD EDWARD HOMUNG) 9 September 2003 See the whole document	1-20
Y	US 6694990 A (ANDREW JOSEPH SPANYER et al.) 24 February See the whole document	1-20
Y	JP 14-336179 A (HOSHIZAKI ELECTRIC CO., LTD.) 26 November 2002 See the whole document	1-20
Y	JP 15-284669 A (TOTO LTD.) 7 October 2003 See the whole document	1-20

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

13 DECEMBER 2005 (13.12.2005)

Date of mailing of the international search report

**14 DECEMBER 2005 (14.12.2005)**

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon 302-701,  
Republic of Korea

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